

# SUCCESS STORIES



## HISTORIC PRESERVATION

MRP was engaged by a Seattle-based church to assist in a multi-phase project consisting of:

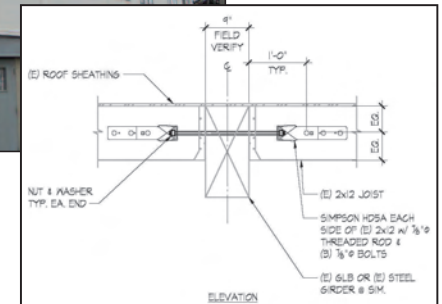
- Phase I - Preliminary seismic evaluation to identify potential vulnerabilities, and solutions
- Phase II - Seismic analysis to develop conceptual upgrade alternatives and construction costs
- Phase III - Seismic upgrade design to develop upgrade construction documents

This 1929-vintage historic complex consists of sanctuary, bell tower and education wing. The goal of the project is to provide a seismically reliable facility in the event of a major regional earthquake.



## PERFORMANCE-BASED EARTHQUAKE RETROFIT

MRP Engineering was approached by the CITY OF RENTON, WA to perform a seismic risk evaluation of a critical fire station building. MRP Engineering has also designed a seismic upgrade intended to provide "immediate occupancy" seismic performance for this critical facility. The project involved a FEMA matching grant and is scheduled for completion in 2009.



MRP Engineering performed an initial seismic risk evaluation of the VIQX CORPORATION facilities located in Seattle, WA. The purpose of the evaluation was to assess the current seismic risks and develop a program to reduce unacceptable business exposures. Following the evaluation, MRP Engineering designed a seismic retrofit for one of the structures based on the client's seismic performance criteria for this facility. The upgrade was successfully completed in 2008,

## MRP Engineering, LLC

A Structural Risk Analysis and Engineering Consulting Company

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## POST-HURRICANE DAMAGE INVESTIGATIONS

For building owners impacted by hurricanes, understanding the causes and sequence of damage involving wind and/or storm surge has significant implications in seeking public assistance funding or commercial insurance claims.

A careful site investigation and structural analysis can provide insights for attributing damage to wind and/or water (surge). Mark Pierepiekarz, President and founder of MRP Engineering, investigated numerous distressed structures and performed root-cause analyses following 2005 hurricanes Katrina and Rita.

Since insurance policies may exclude damage related to rising water, properly attributing damage and assigning losses to wind and/or storm surge are vitally important to the fair settlement of claims.



## PROACTIVE SEISMIC RISK EVALUATIONS

Proactive structural risk evaluation and analysis entail a systematic approach and methodology, beginning with risk screening, followed by in-depth analysis of highly vulnerable structures or components, and completion in a mitigation phase involving design of structural upgrades, or the implementation of other risk mitigation strategies. MRP Engineering has supported its clients world-wide by applying our vast expertise in the seismic performance of facilities in the following industries:

- High Technology
- Utilities
- Energy
- Mining
- Heavy Industrial
- Healthcare
- Education
- Transportation
- Manufacturing
- Telecommunications
- Real Estate
- Retail



**Main Office:**  
Metro Seattle  
Washington  
USA

## POST-EARTHQUAKE DAMAGE ASSESSMENTS

Damage Evaluation Form			
GSA		Building: _____	DATE: _____
EVALUATED BY: _____		EVALUATOR PHONE NUMBER: _____	TIME: _____
EVALUATOR FAX NUMBER: _____		EVALUATOR FAX NUMBER: _____	PAGES: _____
FAX TO: <input type="checkbox"/> Northwest Customer Service Center (206) 271-3386		<input type="checkbox"/> Regional Headquarters (Auburn, WA) (253) 931-7308	
BUILDING DESCRIPTION:			
Address: _____		Contractor: _____	
Year Designed: _____		Lateral System: _____	
Approx. Area: _____			
SAFETY STATUS/PLACARD POSTING			
<input type="checkbox"/> GREEN	INSPECTED—LAWFUL OCCUPANCY PERMITTED		
<input type="checkbox"/> YELLOW	RESTRICTED USE (Describe restrictions): _____		
<input type="checkbox"/> RED	UNSAFE—DO NOT ENTER OR OCCUPY		
COMMENTS: _____			

## INSPECTED

### LAWFUL OCCUPANCY PERMITTED

This structure has been inspected (as indicated below) and no apparent structural hazard has been found.

Inspected Exterior Only  
 Inspected Exterior and Interior

Report any unsafe conditions to local authorities; reinspection may be required.

Inspector comments: \_\_\_\_\_

Facility Name and Address: \_\_\_\_\_

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

(Caution: Aftershocks since inspection may increase damage and risk.)  
This facility was inspected under emergency conditions for: \_\_\_\_\_

U. S. General Services Administration  
(Jurisdiction)

Inspector/Agency: \_\_\_\_\_

Do Not Remove, Alter or Cover this Placard until Authorized by Governing Authority

Remember the smaller size, attach photos and bring / photo location.

MRP Engineering developed manuals for initial damage assessments of **U.S. GENERAL SERVICES ADMINISTRATION (GSA)** Pacific Northwest and Alaska facilities by on-site staff following a major regional earthquake. The purpose of the manuals was to provide facility-specific practical guidelines for GSA property and asset managers to perform immediate post-event damage assessments, determine the level of structural and nonstructural damage, and initiate follow-on actions.